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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sascha Kopplin

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EXAMINER

PATEL, NIMESH G

ART UNIT

PAPER NUMBER

2111

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,388	Applicant(s) KOPPLIN, SASCHA	
	Examiner NIMESH G. PATEL	Art Unit 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-17 and 19-32 is/are pending in the application.
- 4a) Of the above claim(s) 28-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-17 and 19-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 28-32 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The original claims were directed to a connecting element for weight measurement in a vehicle. The newly submitted claims 28-32 are directed towards a specific method of assigning addresses. The particulars of the newly submitted claims 28-32 are not required for the original claims

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 28-32 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11-14, 16 and 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osmer et al.(US 2001/0010424), Hamperl et al.(US 6,773,029) and Denuto et al.(Lin Bus and its Potential for use in Distributed Multiplex Applications), submitted by Applicant.

4. Regarding claim 11, Hamperl discloses a connecting element, comprising: a connecting arrangement to a bus(Figure 2, L); and a bus communications arrangement(Figure 2, 1) including a toroidal core store that stores sensor data where measured values care stored

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consecutively(Column 8, Lines 34-40; toroidal core stores are ring buffer stores, and it is inherent these types of buffers store values consecutively).

5. Hamperl does not specifically disclose the connecting element for a weight measurement in a vehicle seat, wherein the bus is a single wire bus. However, one of ordinary skill in the art would recognize that weight measurement in a vehicle seat is well known in the art. Osmer discloses a system for sensing the weight of an occupant in a vehicle seat. It would have been obvious to combine the teachings of Hamperl and Osmer, since this would enable the use of the sensed weight of the occupant to help decide the force of the airbag system.

6. Hamperl and Osmer do not specifically disclose a single wire bus. However, one skilled in the art would recognize that a single wire bus would reduce the costs compared to multiple wire bus. Denuto discloses a single wire bus used in automotive applications(Figure 4). It would have been obvious to one of ordinary skill in the art to combine the teachings of Hamperl, Osmer and Denuto since this would allow the use of a single wire bus, thereby saving costs.

7. Regarding claim 12, Denuto discloses a connecting element, wherein the connecting arrangement is configured so that the connecting arrangement indicates installation position of the connecting element using hardware encoding(Page 6, Last Paragraph).

8. Regarding claim 13, Denuto discloses a connecting element, wherein the connecting arrangement includes: a voltage connection, a data communications connection, a ground connection(Figure 4), and Osmer discloses configuration connection, a wiring configuration of the configuration connection indicating the installation position(Figure 1, 58).

9. Regarding claim 14, Hamperl discloses a connecting element, wherein the connecting element further comprising an indicator to retrieve the measured value(Column 8 Lines 39-40).

10. Regarding claim 16, Denuto discloses a connecting element, wherein the connecting element is configured as a slave to the bus communications(Figure 4).

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11. Regarding claim 19, Hamperl discloses a bus system, comprising: a control unit(Figure 2, Control Device) for activating a personal protective device as a master; at least two connecting elements(Figure 2, 1) configured as slaves that record sensor data as directed by the control unit(Column 8, Lines 34-40).

12. Hamperl does not specifically disclose the connecting element for a weight measurement in a vehicle seat, wherein the bus is a single wire bus. However, one of ordinary skill in the art would recognize that weight measurement in a vehicle seat is well known in the art. Osmer discloses a system for sensing the weight of an occupant in a vehicle seat. It would have been obvious to combine the teachings of Hamperl and Osmer, since this would enable the use of the sensed weight of the occupant to help decide the force of the airbag system.

13. Hamperl and Osmer do not specifically disclose a single wire bus. However, one skilled in the art would recognize that a single wire bus would reduce the costs compared to multiple wire bus. Denuto discloses a single wire bus used in automotive applications(Figure 4). It would have been obvious to one of ordinary skill in the art to combine the teachings of Hamperl, Osmer and Denuto since this would allow the use of a single wire bus, thereby saving costs.

14. Regarding claim 20, Osmer discloses a bus system, wherein the at least two connecting elements include four connecting elements installed in the vehicle seat(Paragraph 31).

15. Regarding claim 21, Hamperl discloses the connecting element as recited in Claim 11, wherein a sampling flame is sent through the bus communications arrangement at specified intervals(Column 8, Lines 36-37).

16. Regarding claim 22, Denuto discloses the connecting element as recited in Claim 11, wherein the single-wire bus is a LIN bus(Figure 3, LIN bus).

17. Regarding claim 23, Hamperl discloses the connecting element as recited in Claim 11, wherein the toroidal core store stores more than one measured value for the weight

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measurement of each conducting element and is able to store a replacement weight measurement for each conducting element in the event of a transmission error(Column 8, Lines17-18 and 36-37).

18. Regarding claim 24, Hamperl discloses the connecting element as recited in Claim 11, wherein the toroidal core store is a ring buffer store(Column 8, Lines 34-40; toroidal core stores are ring buffer stores).

19. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamperl, Osmer, Denuto and Rudduck(US 2005/0172462).

20. Regarding claim 15, Hamperl, Osmer and Denuto do not specifically disclose a connecting element, further comprising: a memory storing a serial number that characterizes the connecting element. However, Rudduck discloses a memory storing a serial number that characterizes the connecting element(Paragraph 88). It would have been obvious to one of ordinary skill in the art to combine the teachings of Hamperl, Osmer, Denuto and Rudduck to store a serial number in the connecting element since this can uniquely identify each sensor made by the manufacturer.

21. Claims 17 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamperl, Osmer and Rudduck.

22. Regarding claim 17, Hamperl discloses a method for bus communications between a control unit(Figure 2, Control Device) for activating a personal protective device as a master, and at least one connecting element as a slave(Figure 2, 1), comprising: sending the at least one connecting element a request message from the control unit; and transmitting from the connecting element sensor data to the control unit as a function of the request message(Column 8, Lines 23-25).

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23. Hamperl does not specifically disclose the connecting element for a weight measurement in a vehicle seat, wherein the bus is a single wire bus. However, one of ordinary skill in the art would recognize that weight measurement in a vehicle seat is well known in the art. Osmer discloses a system for sensing the weight of an occupant in a vehicle seat. It would have been obvious to combine the teachings of Hamperl and Osmer, since this would enable the use of the sensed weight of the occupant to help decide the force of the airbag system.

Hamperl and Osmer do not specifically disclose causing the control unit to assign to the at least one connecting element a respective address in accordance with a respective serial number of the at least one connecting element. However, Rudduck discloses assigning a connecting element a respective address in accordance with a respective serial number(Paragraph 88). It would have been obvious to one of ordinary skill in the art to combine the teachings of Hamperl, Osmer and Rudduck to use serial number addressing since this would give a unique address and identifier to each sensor, thereby distinguishing one sensor from the other sensors and establishing communications to each specific sensor as needed by the controller.

24. Regarding claim 25, Rudduck discloses the method as recited in Claim 17, wherein the control unit assigns the respective address to the connecting element by polling for serial number runs(Paragraph 88).

25. Regarding claim 26, Rudduck discloses the method as recited in Claim 17, wherein the control unit assigns the respective address to the connecting element by transmitting the respective serial number of the connecting element, after which the control unit transmits the respective address to the connecting element and the connecting element stores the respective address and switches to a normal operating mode(Paragraph 88).

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26. Regarding claim 27, Rudduck discloses the method as recited in Claim 26, wherein the assignment of the respective address to the connecting element occurs in part through hardware coding(Paragraph 88).

Response to Arguments

27. Applicant's arguments filed January 13, 2009 have been fully considered but they are not persuasive.

28. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

29. In response to applicant's argument that the prior art cannot be readily combined because Osmer's system is analog-based system and Denuto's system is a digital system, Examiner respectfully disagrees. Nowhere does Osmer specify the sensors are analog or digital. Furthermore, Hamperl discloses the use of digital bus(Column 4, Lines 53-54). Furthermore, even if the sensors are analog, it is implicit that there would be an analog to digital converter so that analog signals can be interpreted in the controller. One of ordinary skilled in the art would also recognize that analog to digital converters are well known in the art and it would have been obvious to use analog to digital converters to interface analog and digital systems.

30. In response to Applicant's argument that there is no need or benefit in using addresses as disclosed in Rudduck, Examiner respectfully disagrees. Hamperl discloses the use of a digital bus(Column 4, Lines 53-54). One skilled in the art would recognize that addresses are commonly used to identify individual devices on the bus. Rudduck discloses using serial numbers as addresses. It would have been obvious to one of ordinary skill in the art to use

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serial number addressing since this would give a unique address and identifier to each sensor, thereby distinguishing one sensor from the other sensors and establishing communications to each specific sensor as needed by the controller.

Conclusion

31. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIMESH G. PATEL whose telephone number is (571)272-3640. The examiner can normally be reached on M-F, 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinehart H. Mark can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nimesh G Patel/
Examiner, Art Unit 2111

/Khanh Dang/

Primary Examiner, Art Unit 2111